



# Jobs Act for Public K-12 & Higher Education Institutions

## University of Washington Bothell

### About the Jobs Act:

*The Jobs Act for Public K-12 and Higher Education Institutions was funded through the 2010 Supplemental Capital Budget – ESHB 2836 Section 1016. \$50 million was given to Commerce. Commerce awarded 77 grants totaling \$42.5 million. University of Washington Bothell is located in the 1<sup>st</sup> Legislative District. For more information: [www.commerce.wa.gov](http://www.commerce.wa.gov)*

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### Campus is greener than ever before

*The University of Washington Bothell (UWB) is one of the University of Washington's three campuses. UWB offers undergraduate and graduate-level programs. Students can earn a fully accredited UW degree. Approximately 3,300 students attend UWB.*

#### Situation:

UWB and Cascadia Community College are in a unique situation. How do the co-located institutions with a strong history and commitment to sustainability make themselves even greener? And at the same time save money?

#### Solution:

The answer lies in blending renewable resources, a state-of-the-art energy monitoring system, and traditional energy efficiency measures. Strung across the south parking garage are solar arrays. These arrays produce enough power to operate six electric car charging stations. When extra power is produced, it's used throughout the campuses. "The nice thing is that consumers are finally receiving their electric cars and we will have all of the stations in use," said Tony Guerrero, University of Washington Bothell director of Facility Services. "We are prepared to install more stations as the demand for electric car charging stations grow."

### Project Highlights:

- Solar arrays on the parking garage
- Electric car charging stations powered by the solar arrays
- Three real-time "energy dashboards" installed around the campus
- New lighting, controls, HVAC systems, and window film
- Estimated annual energy savings \$185,670





***“The fewer dollars we have to pay to utilities means more money to invest in educating our students. We want to give them the best experience possible.”***

***Marilyn Cox***

***Vice Chancellor of Administration & Planning***

Energy monitoring systems are not traditionally interesting to students, faculty, and staff. But that’s not the case here. Now, everyone on campus checks the three real-time “energy dashboards” installed in UW1, CC3 and the campus library. These touch-screen displays show the campus’ consumption of natural gas and electricity and the amount of electricity produced by the solar panels. And the facility managers love their new monitoring system. Before, they looked at multitudes of computer spreadsheets.

“Now we see green, red, and yellow lights,” said Guerrero. The new monitoring system allows the facility managers to pinpoint trouble spots immediately – saving time, money, and energy.

Throughout almost all of the campus’ buildings new traditional energy efficiency measures such as lighting, controls, software, and window film are quietly saving energy. New computer software reduces the amount of energy the campus’ 2,600 computers use every day to just eight watts per computer. That means every computer saves between \$30 and \$50 per year. Watt

miser controls on all snack and soda vending machines automatically turn off the lights when the machines aren’t in use. Window film installed on selected windows reduces solar gain and glare and makes studying in hallways and lounges much more comfortable.

### **Results:**

The UWB and Cascadia Community College campus is greener than ever before. They have moved well into using 21<sup>st</sup> century technology and plan on adding more solar arrays and electric car charging stations.

The new energy saving technologies are expected to save \$185,670 annually. These savings will pay off the state treasury loan and then the savings will be deposited back into the University’s overall budget. “We were thrilled to receive our \$745,000 Jobs Act grant from the Legislature,” said Marilyn Cox, University of Washington Bothell’s vice chancellor of Administration & Planning. “The fewer dollars we have to pay to utilities means more money to invest in educating our students. We want to give them the best experience possible.”



### **Measures:**

- *HVAC – controls, chiller sequencing,*
- *De-stratification Fans*
- *Laboratory Fume Hood Ventilation*
- *Vending Miser*
- *Power Factor Correction*
- *Electric Vehicle Charging Stations*
- *Energy Dashboard*
- *Solar Arrays*
- *PC Power Down Software*
- *Window Film Installation*
- *Metasys System Re-commissioning.*

***Total project costs: \$ 2,232,777***

***Estimated annual savings: \$ 185,670***

***Grant award amount: \$ 745,000***